

UC-7100 Series

Arm-based 192 MHz industrial computer with 2 LAN ports and 2 serial ports



Features and Benefits

- MOXA ART Arm9 32-bit 192 MHz processor
- 16 or 32 MB RAM
- 8 or 16 MB Flash ROM
- Dual or single 10/100 Mbps Ethernet ports
- 1 or 2 software-selectable RS-232/422/485 ports
- 50 bps to 921.6 kbps baudrate (nonstandard baudrates supported)
- SD slot for storage expansion
- Built-in real-time clock (RTC) and buzzer
- Preinstalled Linux kernel 2.6 platform
- -40 to 75°C wide-temperature models available

Certifications



Introduction

The UC-7101/UC-7110/UC-7112 mini Arm-based communication platforms are ideal for embedded applications. The computers come with 1 or 2 RS-232/422/485 serial ports and single or dual 10/100 Mbps Ethernet LAN ports to provide users with a versatile communication platform.

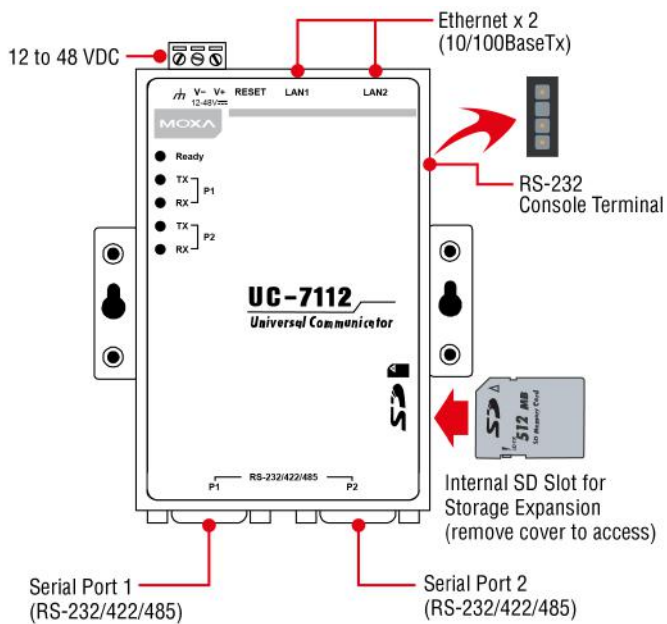
The UC-7101/UC-7110/UC-7112 platforms use the Arm9 CPU. The architecture and modern semiconductor technology used in the Arm9 CPU are designed to provide the CPU with a powerful computing engine and many useful communication functions, but without generating too much heat. The built-in 8 or 16 MB NOR Flash ROM and 16 or 32 MB SDRAM provide plenty of storage, and the SD slot (UC-7101 and UC-7112 only) provides users with flexible storage expansion to run applications that generate a lot of data.

The dual or single LAN ports built into the Arm9 make the UC-7101/7110/UC-7112 computers ideal communication platforms for data acquisition and protocol conversion applications, and the 1 or 2 RS-232/422/485 serial ports allow you to connect a variety of serial devices.

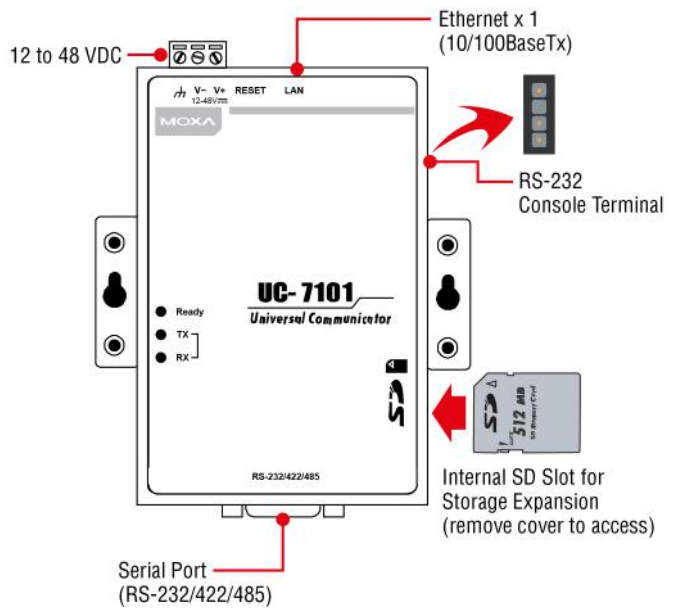
The preinstalled μ Clinux or Linux operating system provides an open platform for software development. This means that software written for desktop PCs can be easily ported to a UC-7101, UC-7110, or UC-7112 embedded computer with a GNU cross compiler, eliminating the need to spend time modifying existing code. The operating system, device drivers, and your own software can all be stored in the UC-7101/UC-7110/UC-7112's flash memory.

Appearance

UC-7110/UC-7112



UC-7101



Specifications

Computer

CPU	MOXA ART Arm9, 192 MHz
Supported OS	UC-7101-LX: μ CLinux UC-7101-T-LX: μ CLinux UC-7110-LX: μ CLinux UC-7110-T-LX: μ CLinux UC-7112-LX: μ CLinux UC-7112-LX Plus: Linux kernel version 2.6
Storage Slot	UC-7101-LX/7112-LX Series: SD slots x 1

Computer Interface

Ethernet Ports	UC-7101: Auto-sensing 10/100 Mbps ports (RJ45 connector) x 1 UC-7110/7112/7112 Plus: Auto-sensing 10/100 Mbps ports (RJ45 connector) x 2
Serial Ports	UC-7101: RS-232/422/485 ports x 1, software-selectable (DB9 male) UC-7110/7112/7112 Plus: RS-232/422/485 ports x 2, software-selectable (DB9 male)
Console Port	UC-7101-LX/7110-LX/UC-7112-LX: RS-232 (TxD, RxD, GND), 3-pin (19200, n, 8, 1) UC-7112-LX Plus: RS-232 (TxD, RxD, GND), 3-pin (115200, n, 8, 1)

Memory

Flash	UC-7101-LX/7110-LX/7112-LX Series: 8 MB UC-7112-LX Plus: 16 MB
SDRAM	UC-7101-LX/7110-LX/7112-LX Series: 16 MB UC-7112-LX Plus: 32 MB

Ethernet Interface

10/100BaseT(X) Ports (RJ45 connector)	1 or 2
Magnetic Isolation Protection	1.5 kV (built-in)

LED Indicators

System	All models: System Ready x 1 UC-7101-LX/7112-LX Series: SD x 1
LAN	2 per port (10/100/1000 Mbps)
Serial	2 per port (Tx, Rx)

Serial Interface

Baudrate	50 bps to 921.6 kbps (supports non-standard baudrates)
Connector	DB9 male
Data Bits	5, 6, 7, 8
Flow Control	RTS/CTS, XON/XOFF, ADDC® (automatic data direction control) for RS-485, RTS Toggle (RS-232 only)
ESD Protection	4 kV, for all signals
No. of Ports	UC-7101-LX Series: 1 UC-7110-LX/7112-LX Series: 2
Parity	None, Even, Odd, Space, Mark
RS-485 Data Direction Control	ADDC® (automatic data direction control)
Serial Standards	RS-232/422/485
Stop Bits	1, 1.5, 2

Serial Signals

RS-232	TxD, RxD, RTS, CTS, DTR, DSR, DCD, GND
RS-422	Tx+, Tx-, Rx+, Rx-, GND
RS-485-2w	Data+, Data-, GND
RS-485-4w	Tx+, Tx-, Rx+, Rx-, GND

Power Parameters

Connection	Removable terminal block
Input Current	170 mA @ 24 VDC 340 mA @ 12 VDC
Input Voltage	12 to 48 VDC
No. of Power Inputs	1
Power Connector	3-pin terminal block
Power Consumption	4.5 W (max.)

Physical Characteristics

Housing	Metal
Dimensions (with ears)	UC-7101: 90 x 111 x 26 mm (3.54 x 4.31 x 1.02 in) UC-7110/7112: 100 x 111 x 26 mm (4.18 x 4.31 x 1.02 in)
Dimensions (without ears)	UC-7101: 67 x 111 x 26 mm (2.64 x 4.31 x 1.02 in) UC-7110/7112: 77 x 111 x 26 mm (3.03 x 4.37 x 1.02 in)

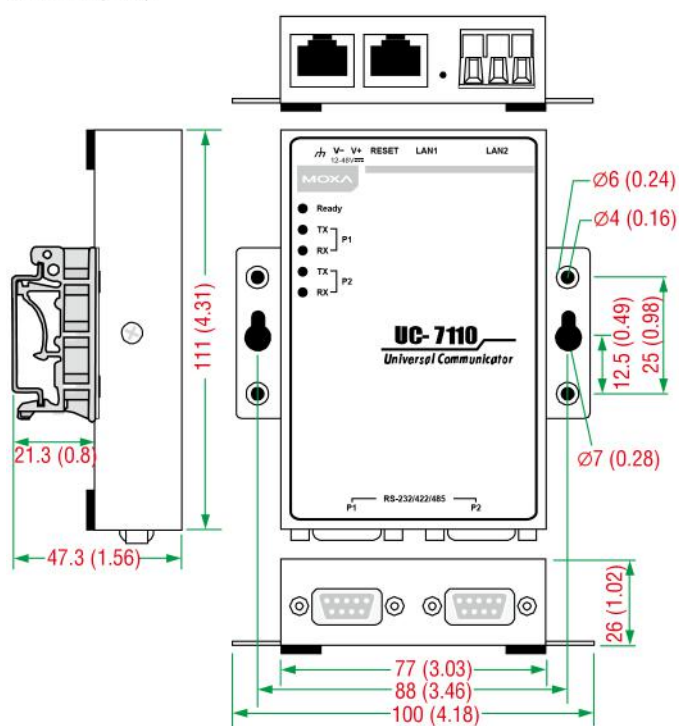
Weight	UC-7101-LX Series: 130 g (0.29 lb) UC-7110-LX/7112-LX Series: 190 g (0.42 lb)
Installation	DIN-rail mounting (with optional kit), Wall mounting, Wall mounting (standard)
Environmental Limits	
Operating Temperature	Standard Models: -10 to 60°C (14 to 140°F) Wide Temp. Models: -40 to 75°C (-40 to 167°F)
Storage Temperature (package included)	Standard Models: -20 to 80°C (-4 to 176°F) Wide Temp. Models: -40 to 85°C (-40 to 185°F)
Ambient Relative Humidity	5 to 95% (non-condensing)
Standards and Certifications	
EMC	EN 55032/24, EN 61000-6-2/-6-4, EN 61000-3-2 Class A, EN 61000-3-3
EMI	CISPR 32, FCC Part 15B Class A
EMS	IEC 61000-4-11 DIPs IEC 61000-4-2 ESD: Contact: 4 kV; Air: 8 kV IEC 61000-4-3 RS: 80 MHz to 1 GHz: 3 V/m IEC 61000-4-4 EFT: Power: 1 kV; Signal: 0.5 kV IEC 61000-4-5 Surge: Power: 1 kV IEC 61000-4-6 CS: 150 kHz to 80 MHz: 3 V/m; Signal: 3 V/m IEC 61000-4-8 PFMF
Environmental Testing	IEC 60068-2-1, DNV 2.0 IEC 60068-2-2, DNV 2.0 IEC 60068-2-30, DNV 2.0
Safety	EN 60950-1, IEC 60950-1, UL 60950-1
Vibration	IEC 60068-2-6
Declaration	
Green Product	RoHS, CRoHS, WEEE
MTBF	
Time	UC-7101-LX Series: 514,973 hrs UC-7110-LX Series: 149,414 hrs UC-7112-LX Series: 148,980 hrs
Standards	UC-7110-LX Series, UC-7112-LX: MIL-HDBK-217F UC-7101-LX Series: Telcordia (Bellcore), GB UC-7112-LX Plus: Telcordia SR332
Warranty	
Warranty Period	5 years
Details	See www.moxa.com/warranty
Package Contents	
Device	1 x UC-7100 Series computer
Cable	1 x 4-pin header to DB9 console port 1 x Ethernet, crossover 1 x terminal block to power jack converter

Power Supply	1 x power adapter, universal
Documentation	1 x document and software CD 1 x product certificates of quality inspection, Simplified Chinese 1 x product notice, Simplified Chinese 1 x quick installation guide 1 x warranty card

Dimensions

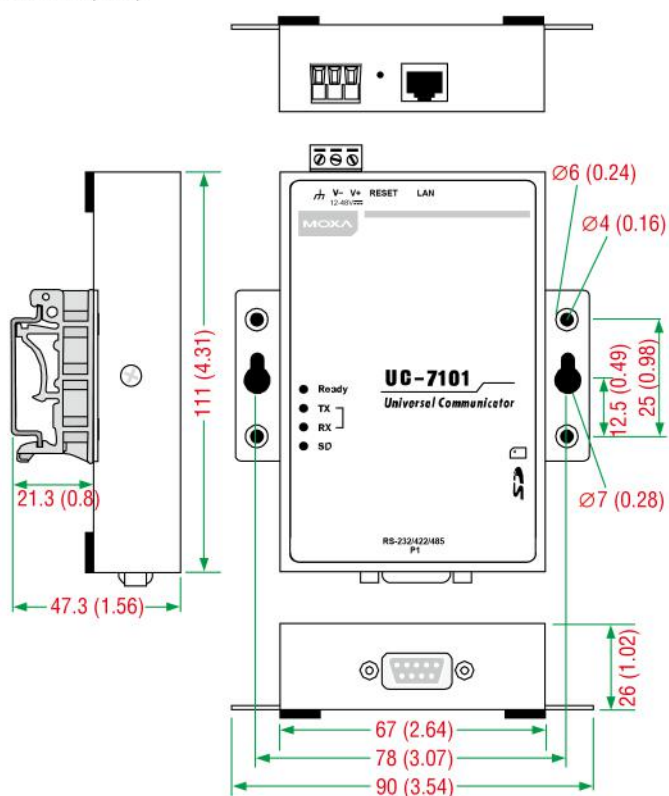
UC-7110/UC-7112

Unit: mm (inch)



UC-7101

Unit: mm (inch)



Ordering Information

Model Name	RAM	Storage	Serial Ports	LAN Ports	Storage Slots	OS	Operating Temp.
UC-7101-LX	16	8	1	1	SD Card	µCLinux	-10 to 60°C
UC-7101-T-LX	16	8	1	1	SD Card	µCLinux	-40 to 75°C
UC-7110-LX	16	8	2	2	–	µCLinux	-10 to 60°C
UC-7110-T-LX	16	8	2	2	–	µCLinux	-40 to 75°C
UC-7112-LX	16	8	2	2	SD Card	µCLinux	-10 to 60°C
UC-7112-LX Plus	32	16	2	2	SD Card	Linux kernel 2.6	-10 to 60°C

Accessories (sold separately)

DIN-Rail Mounting Kits

DK35A	DIN-rail mounting kit, 35 mm
-------	------------------------------

© Moxa Inc. All rights reserved. Updated Jan 21, 2020.

This document and any portion thereof may not be reproduced or used in any manner whatsoever without the express written permission of Moxa Inc. Product specifications subject to change without notice. Visit our website for the most up-to-date product information.